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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/803,615

03/08/2001

Christopher Keith

125468

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52531

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11/12/2008

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EXAMINER

SUBRAMANIAN, NARAYANSWAMY

ART UNIT

PAPER NUMBER

3695

MAIL DATE

DELIVERY MODE

11/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/803,615	<b>Applicant(s)</b> KEITH, CHRISTOPHER	
	<b>Examiner</b> Narayanswamy Subramanian	<b>Art Unit</b> 3695	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 28-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 28-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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### DETAILED ACTION

1. This office action is in response to applicant's communication of August 4, 2008.

Amendments to claims 1, 5, 28, 31, 32, 34, 38, and 42 and addition of new claims 47-49 have been entered. Claims 1-10 and 28-49 are pending and have been examined. The rejections and response to arguments are stated below. Applicants are requested to note the Examiner's new art unit number (**AU 3695**) in their reply to this office action.

#### *Specification*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to support the subject matter set forth in the claims. The specification, as originally filed does not provide support for the invention as now claimed.

The test to be applied under the written description portion of 35 U.S.C. § 112, first paragraph, is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of later claimed subject matter. Vas-Cat, Inc. v. Mahurkar, 935 F. 2d 1555, 1565, 19 USPQ2d 111, 1118 (Fed. Cir. 1991), reh'rg denied (Fed. Cir. July 8, 1991) and reh'rg, en banc, denied (Fed. Cir. July 29, 1991).

Claims 1, 28 and 38 include the limitations such as “automatically, during a time interval, causing a portion or all of an order to be simultaneously available for execution in both the internal market and an external market, wherein the internal and external markets each have a plurality of market participants and are separately capable of executing trades between the

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market participants, and wherein, during the time interval the same portion or all of the order is simultaneously available to the market participants in both the internal and external markets to complete a trade” (emphasis added). However, the specification does not provide written description disclosure to support the claimed limitations of “automatically, during a time interval, causing a portion or all of an order to be simultaneously available for execution in both the internal market and an external market, wherein the internal and external markets each have a plurality of market participants and are separately capable of executing trades between the market participants, and wherein, during the time interval the same portion or all of the order is simultaneously available to the market participants in both the internal and external markets to complete a trade”.

***Claim Rejections - 35 USC § 112***

**4.** The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in Such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**5.** Claims 1-10 and 28-49 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, claims 1-10 and 28-49 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

**6.** Claims 28-37 and 48 are rejected under 35 U.S.C. 112, first paragraph, because they are drawn to a system with single means. A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth

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rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197(Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor. Claims 28-37 and 48 are drawn to a system comprising a computing component configured to perform several software processes. The software processes correspond to software and not tangible hardware components. Claim 28-37 and 48 are in essence drawn to a system with single means. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 38-46 and 49 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory Subject matter. 35 USC 101 requires that in order to be patentable the invention must be a "**new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof**" (emphasis added).

Claims 38-46 and 49 of the disclosed invention is inoperative and therefore lacks utility. Claims 38-46 and 49 are drawn to "a computer-accessible medium having executable instructions stored thereon for operating an internal market, wherein the instructions, when executed, cause a computer to: receive an order that is executable at a market; automatically,

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during a time interval, cause a portion or all of the order to be simultaneously available for execution in both the internal market and an external market, wherein the internal and external markets each have a plurality of market participants and are separately capable of executing trades between the market participants, and wherein, during the time interval, the same portion or all of the order is simultaneously available to the market participants in both the internal and external markets to complete a trade during the time interval; and automatically control execution of the order such that during the time interval the simultaneously available portion or all of the order is executed in at most one of the internal market and the external market, without chance of a duplicate execution of the simultaneously available portion or all of the order”. The computer-accessible medium is interpreted broadly to include an intangible medium. Claims 38-46 and 49 merely recite elements of a computer-accessible medium (“executable instructions” correspond to software program elements and not tangible hardware components) without showing any ability to realize functionality of the recited elements (i.e. functional descriptive material per se) and therefore is rendered inoperative lacking any utility. Note that a computer (or software program) code cannot by itself perform the underlying function until it is loaded on some computer readable memory and accessed by the computer (or a processor). Functional descriptive material, per se, is not statutory. This is exemplified in *In re Warmerdam* 31 USPQ2d 1754 where the rejection of a claim to a disembodied data structure was affirmed. Thus a claim to a data structure, per se, or other functional descriptive material, including computer programs, per se, is not patent eligible subject matter.

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***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-10 and 28-49 are rejected under 35 U.S.C. 103(a) as being unpatentable May (US Pub No. 2002/0138390 A1) in view of Korhammer et al. (US Patent 6,278,982 B1).

Claims 1, 28 and 38, May discloses a method using a software process executing on a computer, a system and a computer-accessible medium having executable instructions stored thereon for operating an internal market, the method comprising: automatically, during a time interval, causing a portion or all of an order to be simultaneously available for execution in both the internal market and an external market, wherein the internal and external markets each have a plurality of market participants and are separately capable of executing trades between the market participants, and wherein, during the time interval the same portion or all of the order is simultaneously available to the market participants in both the internal and external markets to complete a trade (See the entire disclosure of May especially Paragraphs 28, 31, 72, 109, 120-131, 258-265); and automatically controlling execution of the order such that the simultaneously available portion or all of the order is executed in at most one of the internal market and the external market, without chance of a duplicate execution of the simultaneously available portion or all of the order (See the entire disclosure of May especially Paragraphs 28, 31, 72, 109, 120-131, 258-265). Further the limitation “without chance of a duplicate execution of the order in

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more than one of the internal and external markets" is interpreted as an intended use of the controlling execution step. While May teaches the step of controlling execution of the order, May does not explicitly teach the step of automatically controlling execution of the order. However it is old and well known to automate a known manual process using appropriate logic and software. This automation of a known manual process helps in the time efficient performance of the process. It would have been obvious to one of ordinary skill in the art to include these features to the invention of May. The combination of disclosures would have helped an investor to realize the best possible prices for his/her transaction in the most time efficient manner.

Claims 47-49, May teaches the features of operating the internal market according to a two-phase protocol in which in a first phase, permission is obtained from a controlling process to execute the order, and in a second phase, the order is executed only if permission from the controlling process is obtained (See the entire disclosure of May especially Paragraphs 72-73, 109, 114, 258-289). Maintaining control of the trading process implies these features.

Claims 2-6, 9-10, 29-33, 36-37, 39-43 and 46, Korhammer teaches the steps of automatically synchronizing performance of an operation at the internal market and the external market (See Korhammer Column 12 lines 7-30, coordination of split orders implies synchronization); causing a transaction performed in one of the internal and external markets to be performed in the other of the internal and external markets, the transaction being an operation to cancel or a post an order (See Korhammer Column 12 lines 7-30, causing a transaction to be performed is interpreted as intended use); causing an execute operation performed in one of the internal and external markets to cause a cancel operation to be performed in the other of the



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internal and external markets (See Korhammer Column 12 lines 7-30, to cause a cancel operation is interpreted as intended use); conditionally performing an operation in one of the internal and external markets, and performing the conditional operation after receiving confirmation from the other of the internal and external markets that the operation has been communicated to the other of the internal and external markets (See Korhammer Column 12 lines 7-30); providing a mechanism for coupling the internal and external markets such that only one of the internal and external markets maintains the order for execution by a market participant at either of the internal market or the external market (See Korhammer Column 11 lines 54-67, for execution by a market participant at either of the internal market or the external market is interpreted as intended use); re-synchronizing an order book containing orders at each of the internal and external markets before decoupling the internal and external markets, wherein the markets, once decoupled, are capable to separately facilitate an exchange between market participants (See Korhammer Column 12 lines 7-30, wherein the markets, once decoupled, are capable to separately facilitate an exchange between market participants is interpreted as intended use); the automatically ensuring is performed using a software process executing on a computer platform that communicates between the internal market and the external market (Inherent in the disclosure of Korhammer).

Claims 7-8, 34-35 and 44-45, May does not explicitly teach the steps wherein when one of the internal and external markets is in fast symbol mode, the other of the internal and external markets operates as a router and routes orders to the market in fast symbol mode without posting the order at the other of the internal and external markets and wherein an order can be executed at only the market in fast symbol mode.

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Official notice is taken executing orders in a market with short latencies, routing the orders to such markets with short latencies and adjusting the orders in the markets before separating the execution in the markets are old and well known in the art. These actions help an investor to realize the best possible prices for his/her transaction in the most time efficient manner.

It would have been obvious to one of ordinary skill in the art to include these features to the invention of May. The combination of disclosures would have helped an investor to realize the best possible prices for his/her transaction in the most time efficient manner.

#### ***Response to Arguments***

11. Applicant's arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Narayanswamy Subramanian whose telephone number is (571) 272-6751. The examiner can normally be reached Monday-Thursday from 8:30 AM to 7:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached at (571) 272-6771. The fax number for Formal or Official faxes and Draft to the Patent Office is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Narayanswamy Subramanian/  
Primary Examiner  
Art Unit 3695

November 8, 2008